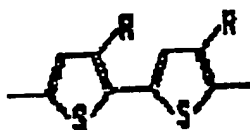


JP10190001

B92



JP10190001

MANUFACTURE OF ORGANIC THIN FILM TRANSISTOR

LUCENT TECHNOL INC

Inventor(s): ;BAO ZHENAN ;DODABALAPUR ANANTH ;FENG YI ;RAJU VENKATARAM REDDY

Application No. 09331398 , Filed 19971202 , Published 19980721 ,

Abstract: PROBLEM TO BE SOLVED: To form an organic semiconductor layer by forming an active layer of organic material and permitting the layer to have a carrier mobility of a specific value or higher and a conductivity of a specific value or lower.

SOLUTION: An active semiconductor layer is formed of organic polymer having a carrier mobility of approximately $10^{-3} \text{ cm}^2/\text{Vs}$ or higher and a conductivity of approximately 10^{-5} s/cm or lower. An organic material active layer is composed of regioregular homopolymer (3-alkylthiophene). The alkyl group has at least 2-12 carbon atoms and is represented by a character R. Branched chains, such as isopropyl and isobutyl, and straight chain alkyl are the examples of the alkyl group. In the regioregular homopolymer of the 3-alkylthiophene monomer, the orientation of the alkyl group of the thiophene part is regular in regard to the thiophene part which adjoins the polymer chain.

JP10190001

Int'l Class: H01L029786 C09K00300 H01L021336

Priority: ;US 96 770535 19961220

MicroPatent Reference Number: 000503824

COPYRIGHT: (C) 1998 JPO